

Remarks

Claims 1-30 are pending. Claims 16-26 are allowed. Claims 1-15 and 27-30 are rejected. Claims 1-11, 13-15 and 27-30 stand rejected under 35 U.S.C. 102(e) as being anticipated by Gai (US 6,892,237). Claim 10 has been amended. Claim 12 has been cancelled. The Applicant respectfully requests reconsideration and allowance of the claims in light of the above amendment and the following remarks.

Specification

The Examiner states that a “summary in accordance with 37 CFR 1.73 and MPEP § 608.01(d) is requested.” Office Action dated November 4, 2008, page 2. The Examiner also states that “the current summary of the invention is objected to because it is no different than the independent claim.” Office Action dated November 4, 2008, page 2.

However, 37 CFR 1.73 states:

A brief summary of the invention indicating its nature and substance, which may include a statement of the object of the invention, should precede the detailed description. Such summary should, *when set forth*, be commensurate with the invention as claimed and any object recited should be that of the invention as claimed.
(emphasis added.)

It is therefore apparent that the Summary of the Invention is optional (“when set forth”). The Applicant respectfully points out three examples of issued patents that omit a summary section as follows: U.S. Pat. Nos. 7,441,038, issued October 21, 2008; 7,392,275, issued June 24, 2008; and 7,383,351 issued June 3, 2008, all of which were examined by the present Examiner. The Applicant could provide several examples of issued US Patents that do not contain a Summary of the Invention, if so desired. The Applicant has amended the specification to remove the Summary section, which reflects the application as originally filed. Therefore, withdrawal of the objection is respectfully requested.

Claim Rejections – 35 U.S.C. § 102

Claims 1-11, 13-15 and 27-30 stand rejected under 35 U.S.C. 102(e) as being anticipated by Gai (US 6,892,237). The rejection is respectfully traversed.

Claim 1 sets forth, in part, “on at least one of the packet processing engines, while processing a packet and in response to the execution instructions, loading a first packet rule from the dynamic packet rule set, comparing packet data at the packet offset specified in the

first packet rule to the data pattern specified in the first packet rule, and, when the comparison indicates a match, performing an action indicated by the action code specified in the first packet rule.”

The Examiner suggests the RAM output 500 of Gai (FIG. 5) to be the dynamic packet rule set (and apparently, to be the first packet rule as well) of claim 1, the offset field 516 of Gai (FIG. 5) to be the packet offset of claim 1, the 65-bit instruction-specific data area 514 of Gai (FIG. 5) to be the data pattern of claim 1, the op code field 508 of Gai (FIG. 5) to be the action code of claim 1, and the subroutine stack 328 of Gai (FIG. 3) to be the instruction store of claim 1. Office Action dated February 21, 2008, page 3.

However, if the RAM output 500 is the first packet rule, and if the offset field 516 is the packet offset, then Gai fails to disclose comparing packet data at the alleged packet offset 516 to the alleged data pattern 514 specified in the alleged first packet rule 500. Rather, Gai discloses a comparison between message data portion 310 of Gai (FIG. 4) and regular expressions in CAM 304. Gai, column 20, lines 24-26; column 21, lines 51-56; column 22, lines 43-46; and column 24, lines 11-15. For at least this reason, the Applicant submits that claim 1 is patentable under 35 U.S.C. 102(e) over Gai, and is therefore allowable. Based at least on their dependency from claim 1, and for their own merits, claims 7-8 are in allowable form.

Claim 2 sets forth the method of claim 1: “wherein the data pattern in each rule comprises a mask and a bit pattern, and wherein comparing packet data to the data pattern comprises masking the packet data using the mask, and comparing the masked packet data to the bit pattern.”

Claim 3 sets forth the method of claim 2: “wherein the shared memory comprises a content-addressable memory (CAM), wherein the data pattern for at least some rules are stored in the CAM, and wherein masking the packet data and comparing the masked packet data to the bit pattern are performed by the CAM for data patterns stored in the CAM.”

The Examiner suggests that the teachings of claim 2 and 3 are inherent in the CAM of Gai. Office Action dated November 4, 2008, page 4. However, the Examiner is reminded that “[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. . . . To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill’” *See* MPEP 2112, Requirements of Rejection Based on Inherency; Burden of Proof, IV. Examiner Must Provide Rationale Or Evidence Tending To

Show Inherency, *citing In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999).

The Applicant submits that this burden has not been met. For example, the Examiner proposes that “[m]asking is inherent in CAM because it is required to mask bits for comparison.” The Applicant respectfully disagrees. While bits certainly may be masked and then compared, such masking need not be necessarily present to perform a bit comparison. Gai teaches a “mask applied to determine whether the particular cells [of CAM 304] of its block are ‘care’ or ‘don’t care’.” Gai, column 8, lines 59-62. But Gai fails to teach, whether explicitly or inherently, masking the packet data using a mask, and comparing the masked packet data to the bit pattern of the data pattern, as set forth in claim 2. Gai also fails to teach that such masking/comparison function is performed by the CAM, as set forth in claim 3. For at least this reasons, and for their dependency from claim 1, the Applicant submits that claims 2 and 3 are patentable under 35 U.S.C. 103(e) over Gai, and are therefore allowable.

Claim 4 sets forth the method of claim 1, “wherein performing the action comprises incrementing a counter specified in the first packet rule.” The Examiner proposes that the counter memory 330 of Gai teaches the limitations of claim 4. Office Action dated February 21, 2008, page 3. However, if the RAM output 500 is the first packet rule, then the counter memory 330 of Gai is not in the first packet rule 500, as set forth in claim 4. For at least this reason, and for its dependency from claim 1, the Applicant submits that claim 4 is also in allowable form.

Claim 5 sets forth the method of claim 4, “wherein the counter is located in a local memory area accessible by each packet processing engine, and wherein incrementing the counter comprises blocking other processors from accessing the counter during the increment.” The Examiner states at page 4 of the Office Action dated February 21, 2008, that “[t]he ‘wherein clauses’ merely consist of non-functional descriptive material.” The Applicant respectfully disagrees. While the limitations of claim 5 may indeed be descriptive of an embodiment of the invention, there is nothing to suggest that they are non-functional. Moreover, the Examiner is reminded that “the prior art reference (or references when combined) must teach or suggest all the claim limitations.” MPEP 706.02(j) Contents of a 35 U.S.C. 103 Rejection. For at least this reason, and for its dependency from claims 1 and 4, the Applicant submits that claim 5 is allowable.

Claim 6 sets forth the method of claim 1, “wherein performing the action comprises loading a second packet rule specified in the first packet rule.” The Examiner suggests that “[a]ll entries in Gai’s CAM are meant to be accessed and searched.” Office Action dated

February 21, 2008, page 4. While this may be true, Gai nevertheless fails to specifically teach that a second packet rule is specified in the first packet rules, much less that performing the action comprises loading the second packet rule specified in the first packet rule. For at least this reason, claim 6 is likewise in allowable form.

Claim 9 sets forth the method of claim 1, “wherein writing the dynamic packet rule set comprises arranging the rules in the set in order based on packet offset, with the rule having the smallest packet offset appearing first in the set.” The Examiner states at page 4 of the Office Action dated February 21, 2008, that “[t]he ‘wherein clauses’ merely consist of non-functional descriptive material.” The Applicant respectfully disagrees. While the limitations of claim 9 may indeed be descriptive of an embodiment of the invention, there is nothing to suggest that they are non-functional. Moreover, the Examiner is reminded that “the prior art reference (or references when combined) must teach or suggest all the claim limitations.” MPEP 706.02(j) Contents of a 35 U.S.C. 103 Rejection. For at least this reason, and for its dependency from claims 1 and 4, the Applicant submits that claim 5 is allowable.

Claim 10 has been amended to incorporate the limitations of claim 12, and claim 12 has been correspondingly cancelled. While the Office Action Summary states that claim 12 is rejected, the body of the Office Action does not address the rejection of claim 12. The Applicant understands that the prior rejection of claim 12 under 35 U.S.C. 112, second paragraph, has been overcome (as a result of a previous amendment), and therefore, the Applicant understands that claim 12 includes allowable subject matter. For this reason, the Applicant has moved the limitations of claim 12 into independent claim 10, and submits that independent claim 10 is now in proper form for allowance, as are dependent claims 10-15.

Pertaining to claim 27, the Applicant submits that this claim is in proper form for allowance for substantially the reasons mentioned above with reference to claim 1.

Pertaining to claim 28, the Applicant submits that this claim is allowable for substantially the reasons mentioned above with reference to claim 4.

Pertaining to claim 29, the Applicant submits that this claim is allowable for substantially the reasons mentioned above with reference to claim 6.

Based at least on its dependency from claim 27, and for its own merits, the Applicant submits that claim 30 is in allowable form.

Allowable Subject Matter

Claims 16-26 are allowed. The Applicant thanks Examiner Eng for acknowledging the patentable subject matter of these claims.

For the foregoing reasons, reconsideration and allowance of the claims is requested. Please telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

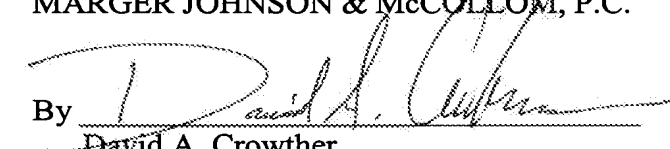
Respectfully submitted,

32231

Customer No.

MARGER JOHNSON & McCOLLOM, P.C.

By


David A. Crowther.

Registration No. 60,426

210 S.W. Morrison Street, Suite 400
Portland, Oregon 97204
Telephone: (503) 222-3613